

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (currently amended): A method of removing a mandrel from a part, comprising:
creating a vacuum in the mandrel after the part has been formed on the mandrel;
applying a debonding agent on the surface of the mandrel after the part has been formed on the mandrel; and
removing the mandrel from the part.

Claim 2 (currently amended): ~~The method of claim 1, further~~ A method of removing a mandrel from a part, comprising:

creating a vacuum in the mandrel;
applying a debonding agent on the surface of the mandrel;
removing the mandrel from the part; and
cutting an access passage in the part before creating a vacuum in the mandrel.

Claim 3 (original): The method of claim 2, wherein cutting an access passage further comprises cutting an access passage to allow for the straightest path to remove the mandrel from the part.

Claim 4 (currently amended): ~~The method of claim 1, further~~ A method of removing a mandrel from a part, comprising:

creating a vacuum in the mandrel;
applying a debonding agent on the surface of the mandrel;
removing the mandrel from the part; and
removing media from the mandrel.

Claim 5 (currently amended): ~~The method of claim 1, further~~ A method of removing a mandrel from a part, comprising:

creating a vacuum in the mandrel;

applying a debonding agent on the surface of the mandrel;

removing the mandrel from the part; and

releasing the vacuum in the mandrel prior to applying the debonding agent.

Claim 6 (currently amended): The method of claim 1, wherein creating a vacuum further comprises alternately creating a vacuum in the mandrel and releasing the vacuum in the mandrel after the part has been formed on the mandrel.

Claim 7 (original): The method of claim 6, wherein the vacuum is alternately created and released two times.

Claim 8 (original): The method of claim 6, wherein the vacuum is alternately created and released at least three times.

Claim 9 (original): The method of claim 6, wherein the vacuum is created for five to ten seconds.

Claim 10 (original): The method of claim 1, wherein applying the debonding agent comprises applying isopropyl alcohol on the surface of the mandrel.

Claim 11 (original): The method of claim 1, further comprising allowing the debonding agent to stand on the mandrel for a designated period of time.

Claim 12 (original): The method of claim 11, wherein the designated period of time is three to five minutes.

Claim 13 (original): The method of claim 1, wherein the mandrel is a frame mandrel.

Claim 14 (original): The method of claim 1 wherein the part is a fuselage.

Claim 15 (withdrawn): A system for removing a mandrel from a part, comprising:

- a creating component configured to create a vacuum in the mandrel;
- an applying component configured to apply a debonding agent on the surface of the mandrel; and
- a removing component configured to remove the mandrel from the part.

Claim 16 (withdrawn): The system of claim 15, further comprising a cutting component configured to cut an access passage in the part before creating a vacuum in the mandrel.

Claim 17 (withdrawn): The system of claim 16, wherein the cutting component is configured to cut an access passage allowing for the straightest path to remove the mandrel from the part.

Claim 18 (withdrawn): The system of claim 15, further comprising a second removing component configured to remove media from the mandrel.

Claim 19 (withdrawn): The system of claim 15, further comprising a releasing component configured to release the vacuum in the mandrel prior to applying the debonding agent.

Claim 20 (withdrawn): The system of claim 15, wherein the creating component is configured to alternately create a vacuum in the mandrel and release the vacuum in the mandrel.

Claim 21 (withdrawn): The system of claim 20, wherein the creating component is configured to alternately create and release the vacuum two times.

Claim 22 (withdrawn): The system of claim 20, wherein the creating component is configured to alternately create and release the vacuum at least three times.

Claim 23 (withdrawn): The system of claim 20, wherein the creating component is configured to create the vacuum for five to ten seconds.

Claim 24 (withdrawn): The system of claim 15, wherein the applying component is configured to apply isopropyl alcohol on the surface of the mandrel.

Claim 25 (withdrawn): The system of claim 15, further comprising a standing component configured to allow the debonding agent to stand on the mandrel for a designated period of time.

Claim 26 (withdrawn): The system of claim 25, wherein the designated period of time is three to five minutes.

Claim 27 (withdrawn): The system of claim 15, wherein the mandrel is a frame mandrel.

Claim 28 (withdrawn): The system of claim 15, wherein the part is a fuselage.

Claim 29 (currently amended): A computer-implemented method of removing a mandrel from a part, comprising:

creating a vacuum in the mandrel after the part has been formed on the mandrel;
applying a debonding agent on the surface of the mandrel after the part has been formed on the mandrel; and
removing the mandrel from the part.

Claim 30 (withdrawn): A system for removing a mandrel from a part, comprising:

creating means for creating a vacuum in the mandrel;
applying means for applying a debonding agent on the surface of the mandrel;
and
removing means for removing the mandrel from the part.

Claim 31 (original): A method of removing a mandrel from a part, comprising:

cutting an access passage in the part;
alternately creating a vacuum in the mandrel and releasing the vacuum in the mandrel;
applying a debonding agent on the surface of the mandrel;
allowing the debonding agent to stand on the mandrel for a designated period of time; and
removing the mandrel from the part.

Claim 32 (original): The method of claim 31, wherein cutting an access passage further comprises cutting an access passage to allow for the straightest path to remove the mandrel from the part.

Claim 33 (original): The method of claim 31, further comprising removing media from the mandrel.

Claim 34 (original): The method of claim 31, wherein the vacuum is alternately created and released two times.

Claim 35 (original): The method of claim 31, wherein the vacuum is alternately created and released at least three times.

Claim 36 (original): The method of claim 31, wherein the vacuum is created for five to ten seconds.

Claim 37 (original): The method of claim 31, wherein applying the debonding agent comprises applying isopropyl alcohol on the surface of the mandrel.

Claim 38 (original): The method of claim 31, wherein the designated period of time is three to five minutes.

Claim 39 (original): The method of claim 31, wherein the mandrel is a frame mandrel.

Claim 40 (original): The method of claim 31, wherein the part is a fuselage.

Claim 41 (withdrawn): A system for removing a mandrel from a part, comprising:

- a cutting component configured to cut an access passage in the part;
- a creating component configured to alternately create a vacuum in the mandrel and release the vacuum in the mandrel;
- an applying component configured to apply a debonding agent on the surface of the mandrel;
- a standing component configured to allow the debonding agent to stand on the mandrel for a designated period of time; and
- a removing component configured to remove the mandrel from the part.

Claim 42 (withdrawn): The system of claim 41, wherein the component is configured to cut an access passage to allow for the straightest path to remove the mandrel from the part.

Claim 43 (withdrawn): The system of claim 41, further comprising a second removing component configured to remove media from the mandrel.

Claim 44 (withdrawn): The system of claim 41, wherein the creating component is configured to alternately create and release the vacuum two times.

Claim 45 (withdrawn): The system of claim 41, wherein the creating component is configured to alternately create and release the vacuum at least three times.

Claim 46 (withdrawn): The system of claim 41, wherein the creating component is configured to create the vacuum for five to ten seconds.

Claim 47 (withdrawn): The system of claim 41, wherein the applying component is configured to apply isopropyl alcohol on the surface of the mandrel.

Claim 48 (withdrawn): The system of claim 41, wherein the designated period of time is three to five minutes.

Claim 49 (withdrawn): The system of claim 41, wherein the mandrel is a frame mandrel.

Claim 50 (withdrawn): The system of claim 41, wherein the part is a fuselage.

Claim 51 (original): A computer-implemented method of removing a mandrel from a part, comprising:

- cutting an access passage in the part;
- alternately creating a vacuum in the mandrel and releasing the vacuum in the mandrel;
- applying a debonding agent on the surface of the mandrel;
- allowing the debonding agent to stand on the mandrel for a designated period of time; and
- removing the mandrel from the part.

Claim 52 (withdrawn): A system for removing a mandrel from a part, comprising:

- cutting means for cutting an access passage in the part;
- creating means for alternately creating a vacuum in the mandrel and releasing the vacuum in the mandrel;
- applying means for applying a debonding agent on the surface of the mandrel;
- standing means for allowing the debonding agent to stand on the mandrel for a designated period of time; and
- removing means for removing the mandrel from the part.

Claim 53 (original): A method of removing a frame mandrel from a fuselage, comprising:

cutting an access passage in the fuselage to allow for the straightest path to
remove the frame mandrel from the part;
alternately creating a vacuum in the frame mandrel for five to ten seconds and
releasing the vacuum in the frame mandrel at least two times;
applying isopropyl alcohol on the surface of the frame mandrel;
allowing the isopropyl alcohol to stand on the frame mandrel for three to five
minutes; and
removing the frame mandrel from the fuselage.

Claim 54 (withdrawn): A system for removing a frame mandrel from a fuselage,
comprising:

a cutting component configured to cut an access passage in the fuselage to allow
for the straightest path to remove the frame mandrel from the part;
a creating component configured to alternately create a vacuum in the frame
mandrel for five to ten seconds and release the vacuum in the frame mandrel at
least two times;
an applying component configured to apply isopropyl alcohol on the surface of
the frame mandrel;
an allowing component configured to allow the isopropyl alcohol to stand on the
frame mandrel for three to five minutes; and
a removing component configured to remove the frame mandrel from the
fuselage.

Claim 55 (original): A computer-implemented method of removing a frame mandrel from
a fuselage, comprising:

cutting an access passage in the fuselage to allow for the straightest path to
remove the frame mandrel from the part;
alternately creating a vacuum in the frame mandrel for five to ten seconds and
releasing the vacuum in the frame mandrel at least two times;
applying isopropyl alcohol on the surface of the frame mandrel;
allowing the isopropyl alcohol to stand on the frame mandrel for three to five
minutes; and
removing the frame mandrel from the fuselage.

Claim 56 (withdrawn): A system for removing a frame mandrel from a fuselage,
comprising:

cutting means for cutting an access passage in the fuselage to allow for the
straightest path to remove the frame mandrel from the part;
creating means for alternately creating a vacuum in the frame mandrel for five to
ten seconds and releasing the vacuum in the frame mandrel at least two times;
applying means for applying isopropyl alcohol on the surface of the frame
mandrel;
standing means for allowing the isopropyl alcohol to stand on the frame mandrel
for three to five minutes; and
removing means for removing the frame mandrel from the fuselage.